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Laminitis in cattle

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Lameness represents the third disease in terms of frequency and economic impact after the mastitis and reproduction-related issues. The incidence is up 60% in some farms. The economic impact is important because of the decline in milk production, decreased reproductive efficiency, the withhold of milk due to antibiotic treatments, weight loss and often earlier culling.

At the level of the cow's feet, the junction between the hoof wall and the soft tissue is very important for the supply of nutrients and the elimination of waste. Degradation of this area (by overload, by influx of toxins through blood or trauma) can cause bleeding, degradation of the hoof wall and lesions of the hoof. The footpad has a "dampening" role. As its composition is mainly fat, weight loss of the cow can cause lameness.

Diffuse laminitis, also called "pododermatitis", is involved in more than 50% of cases of lameness. It manifests in sub acute, acute or chronic form. It can lead to several complications including sole ulcers, detachment of the white line and rupture of the flexor tendon.

There are several risk factors for laminitis. At the food level, high energy value rations rich in nitrogen, with a high rate of concentrates (highly fermentable carbohydrate) and low fibre predispose to laminitis. At the level of housing, avoid repeated weight on the hind hooves (strong drop-offs, short stalls, sleeping area uncomfortable pushing the cow to stand ground too hard, too high edges). The flooring should not be too abrasive (faster wear of the hoof wall). In addition, bedding moisture softens the hoof. Various events including the stress of calving, ailments and weight bearing changes due to increased body condition score are also risk factors.

During acute laminitis, signs appear suddenly. The affected animals struggle to stand up, have increased heart rate, respiratory rate and body temperature. It can be due to accidental consumption of cereals causing a decrease in the pH of the rumen (5 or less) and inactivity. The prognosis is guarded. As a first step, to remove the cause (example: excessive consumption of concentrates) and maintain the cow on a bedding that is flexible and comfortable. Anti-inflammatories and antihistamines can be administered.

In the case of sub-acute laminitis, diagnosis may not be clear. The cow has a hesitant movement, like she walks on eggshells with abnormal posture (tight hocks, displaced feet). On observation of the hooves, a yellowing dirty sole as well as bruising of the sole on the white line are visible. It is often due to a change of nutrition causing a release of chemicals that increase blood flow and pressure in the foot and therefore discomfort. Chronic laminitis is the progression of sub-acute laminitis with an overgrowth of the hoof. Cows have a gait that becomes progressively painful. They are lean, hoof wall production is excessive, the shanks are tight and the legs spread. Hooves deform progressively into a slipper shape. The two hind limbs are often simultaneously affected. For these last two cases, the prognosis for survival may be better but the treatment consists of routine corrective trimming.

To prevent the risk of laminitis, you need to:

- Reduce the risk of acidosis: increase the fibre content of rations, use less rapidly degraded energy sources
- Observe the food transitions especially at the time of the calving
- Detect early lesions of laminitis by establishment of routine trimming on your farm
- Improve the comfort of the housing: remove risk of injury, improve comfort of bedding, hygiene